

CLAIMS

1. A preparation for facilitating site-specific gene conversion, comprising at least a collagen and an oligonucleotide for gene conversion.

2. A preparation for site-specific gene therapy, comprising at least a collagen and an oligonucleotide for gene conversion.

3. The preparation according to claim 1 or 2, wherein collagen is water-soluble collagen.

4. The preparation according to claim 3, wherein the water-soluble collagen is atelocollagen.

5. The preparation according to any one of claims 1 to 4, wherein the oligonucleotide for gene conversion is an oligonucleotide comprising of at least 20 bases.

6. The preparation according to any one of claims 1 to 5, wherein the oligonucleotide for gene conversion is a RNA/DNA chimeric oligonucleotide or a DNA oligonucleotide.

7. The preparation according to claim 5 or 6, wherein the oligonucleotide for gene conversion is an oligonucleotide having a

nucleotide sequence forming a Watson-Crick type base pair containing mismatch pairing of 1 to 3 base pairs, with a sense strand or an antisense strand of a gene to be converted.

5 **8. The preparation according to claim 5 or 6, wherein the oligonucleotide for gene conversion is an oligonucleotide having a nucleotide sequence forming a Watson-Crick type base pair containing deletion or insertion of 1 to 3 bases, with a sense strand or an antisense strand of a gene to be converted.**

10 **9. The preparation according to claim 7, wherein the mismatch pairing is located at a central part of an oligonucleotide.**

15 **10. The preparation according to claim 8, wherein the deletion or insertion of bases is located at a central part of an oligonucleotide.**

20 **11. The preparation according to any one of claims 1 to 10, wherein a dosage form is solution-like.**

12. The preparation according to claim 11, which contains a phosphate salt in a range of 0.01 M to 0.1M.

25 **13. The preparation according to claim 11, which contains a sodium salt in a range of 0.07M to 0.14M.**

14. The preparation according to any one of claims 11 to 13, wherein an oligonucleotide for gene conversion and a collagen form a particulate associated body.

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15. The preparation according to claim 14, wherein a long diameter of the particulate associated body is 300nm to 50 μ m.

16. The preparation according to any one of claims 11 to 15, which comprises collagen in a range of 0.01 to 1.0% by weight.

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17. The preparation according to any one of claims 11 to 15, which comprises collagen in a range of 0.01 to 0.25% by weight.

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18. A preparation for facilitating site-specific gene conversion or a preparation for gene therapy, obtained by dissolving collagen in a solution containing 0.01M to 0.1M of a phosphate salt and 0.07M to 0.14M of a sodium salt, adding an oligonucleotide solution for gene conversion containing the same concentration of a phosphate salt and the same concentration of a sodium salt thereto, and stirring this under a temperature of 1 to 10°C.

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19. The preparation according to any one of claims 1 to 10, wherein a dosage form is solid-like, and an oligonucleotide for gene conversion and a collagen form a particulate associated body.

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20. The preparation according to claim 19, wherein an oligonucleotide for gene conversion and a collagen form a particulate associated body.

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21. The preparation according to claim 20, wherein a long diameter of a particulate associated body is 300nm to 50 μ m.

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22. A method of arbitrarily converting a specific base on a genome gene in a nucleus of a cell, which comprises contacting the preparation for facilitating gene conversion as defined in any one of claims 1, and 3 to 21 with the cell.

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23. The method according to claim 22, wherein the cell is a mammal cell.

24. The method according to claim 22, wherein the cell is yeast or fungus.

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25. A preparation for facilitating an oligonucleotide intranuclear localization in a nucleus, comprising at least a collagen and an oligonucleotide.

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26. The preparation for facilitating intranuclear localization according to claim 25, which contains a phosphate salt in a range of

0.01 M to 0.1M.

27. The preparation for facilitating intranuclear localization according to claim 25 or 26, which contains a sodium salt in a range of 0.07M to 0.14M.

28. The preparation for facilitating intranuclear localization according to any one of claims 25 to 27, wherein the oligonucleotide and the collagen form a particulate associated body.

29. The preparation for facilitating intranuclear localization according to claim 28, wherein a long diameter of the particulate associated body is 300nm to 50 μ m.

30. The preparation for facilitating intranuclear localization according to any one of claims 25 to 29, which comprises a collagen in a range of 0.01 to 1.0% by weight.

31. The preparation for facilitating intranuclear localization according to any one of claims 25 to 29, which comprising collagen in a range of 0.05 to 0.25% by weight.

32. A method of gene conversion of a cell, which comprises contacting a composition comprising at least collagen and an oligonucleotide for gene conversion with a cell in a living body by

oral, nasal, via lung, intraportal, intramuscular, subcutaneous, organ surface, intraorgan or transdermal administration.

33. A method of treating a gene diseases, which comprises
5 **using the method as defined in claim 32.**